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LATERAL CURVATURE OF THE SPINE.*

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The subject of this paper is too broad to allow of more than a bare resume being given in the short time allotted to me at this meeting, and I shall only attempt to bring out or emphasize such points as may be of value to the general practitioner in the guidance of his cases. If, as may happen, my theories and methods differ from many that are popularly accepted, I have no apology to offer for they are the result of much study and a long series of personal observations.

By the term scoliosis or "lateral curvature of the spine," we mean a deviation of the spine laterally from the perpendicular, not taking into account the normal antero-posterior curves of the column.

Viewed from behind, the spine of a perfectly normal individual should be straight, the shoulders level, and the tips of the scapulæ equally distant from the floor by actual measurement. Any deviation from these requirements constitutes an abnormality, and the fact that a large number of people fail to come up to the standard of perfection in no wise invalidates the truth of the assertion, nor does the fact that lateral curvature is one of the most common conditions afford any comfort to the mother who has allowed her daughter to become crooked because her family physician has assured her that everybody is more or less asymmetrical, and that the curvature will right itself as the child grows older.

For convenience I have placed the cases of lateral curvature in

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two general classes. The first form, which is the most common and fortunately the most amenable to treatment, is known as the "flexible curve;" it is easily straightened, and is unaccompanied by structural changes in either the muscles or vertebræ. The second variety is the "fixed curve;" it can not be straightened by extension or ordinary force, and is almost always accompanied by rotation, by change in the shape of the vertebræ and intervertebral cartilages and structural change in the contractured muscles. The first or "flexible" variety may not progress beyond the possibility of successful treatment, or it may be simply the first stage of the second or "fixed" variety with all its bad features and impossibility of complete correction.

It is very easy to determine in which class a case shall be placed by two simple tests: The first is to stretch the patient up in a Sayre's suspension apparatus; the other, to have the patient bend forward from the hips with the knees stiff. If in these positions the curvature disappears entirely and the back is flat without any appearance of rotation, the case may be diagnosed as one of "flexible" curvature. If, on the other hand, the spinous processes do not come onto a straight line, or the ribs are more prominent, posteriorly, on one side than the other—thus indicating rotation—the case is one of the "fixed" variety to a greater or less degree.

As has been stated, the condition is one of great frequency. According to the investigations of Lausanne among school children, it was present in some degree to 24.6 per cent., and was found five or six times more frequently in girls than in boys. Probably the more athletic habits of the boys have much to do with their immunity.

Lovett (Keen's Surgery, Vol. II) gives the following as the most common causes:

"1. Faulty attitude in sitting and standing, favored by improper school furniture.

"2. Occupations or recreations necessitating the prolonged maintenance of a one-sided posture.

"3. Inequality in the length of the limbs tilting the pelvis and asymmetry of the pelvis.

"4. Unequal vision or hearing on the two sides, causing a twisted or bent position of the head.

"5. Paralysis of the muscles of the back (anterior poliomyelitis, cerebral paralysis, neuritis, syringomyelia, traumatic paralysis and hysteria).

"6. Torticollis.
"7. Empyæma and its subsequent cicatricial contraction.
"8. Heart disease.
"9. Congenital deformities of the spine and thorax.
"10. Rickets and osteomalacia."

He also adds heredity as a predisposing cause.

Putting aside conditions of actual diseases, the causes finally resolve themselves into two classes: The static, pertaining to the maintenance of balance; and the muscular, which may be either contractural or asthenic in character.

In order to maintain the upright position on his narrow base—that is his two feet—a human being must always preserve a condition of perfect equilibrium; in other words, his weight must be equally distributed about the center of gravity, or he will topple over. In a normal human being, standing upright, the center of gravity is on a straight line drawn from the top of the head to a point midway between the two feet, and the row of spinous processes should correspond to this line. If anything occurs which throws additional weight to one side a corresponding amount must be added to the opposite side or the balance will be lost. Instances are afforded by any condition which habitually throws the head to one side as in torticollis, unequal vision or hearing on the two sides; or, from below, one sided knock-knee, bowlegs, or depressed arch of one foot, as static causes and are the most common.

No satisfactory reason has yet been given for the contractural deformities of the spine wherein the muscles undergo structural change and produce permanent distortions. The most plausible theory is that it is due to some form of degeneration of the cord acting locally and without pain or other symptoms in the early stages.

In the asthenic muscular variety the curvature is due to the fact that the muscles on one side of the spine are weaker than those on the other; therefore, they gradually give way to the continuous pull of the stronger muscles and a curvature is produced with the convexity towards the weaker side. Usually such cases are also affected, statically, for they are likely to have knock-knee or a depressed arch, or, in some cases, an actual difference in the size and length of the two limbs.

The symptoms of scoliosis are so self-evident that it seems almost

supererogatory to call attention to them, and yet, one is often astonished at the amount of actual and sometimes irremediable deformity with which some patients are brought to the surgeon.

Parents differ greatly as to the amount of attention they give to their children; some are watchful and even over-solicitous, while others, although they may attend to acute conditions, under-estimate the importance of symptoms which are not painful, and they procrastinate in beginning treatment which involves expense. So the children are often neglected until the symptoms become so pronounced that they cannot be ignored. Another class of parents who mean to do everything for their children, are unobservant, and they do not realize that their children are out of shape until their attention is drawn to the fact by the child's dressmaker, who experiences difficulty in fitting a dress.

In the flexible cases the patients are likely to be anæmic, catarrhal, subject to adenoids, and are poor feeders. Examination may show one single long or two or more short curves in the line of spinous processes. As the patient stands with the arms hanging loosely it will be observed that one hip is more prominent than the other, one shoulder lower, the tip of one scapula lower, and that the space between the arm and the waist line on one side is much greater than on the other. Extension in the Sayre's apparatus or bending forward from the hips causes the deformity to disappear.

Sometimes the flexible cases are very fat but not strong. In the majority of these cases, there is a difference in the muscular development of the two sides, and generally the arch of one foot is lower than the other.

On the other hand, in the cases of fixed curve, if not far advanced, the patients are often in excellent general health, and it is only because the deformity is so apparent that attention is attracted to it. Later on, when the distortion becomes so marked that the heart and other vital organs are pressed upon, the patient suffers greatly.

The appearances in the fixed cases are usually those of the flexible variety increased and with rotation added. Sometimes, however, rotation may be the first symptom, and I have seen cases where the line of the spinous processes was perfectly straight, and yet the ribs and the tip of the scapula on one side were prominent. This indicates to my mind that the theory that rotation is the result of in-

ability to bear superincumbent weight is not correct. Rotation is the result of the vicious contraction of certain muscles, the cause of which, as has been already stated, is not certainly known. Rotation is shown by the projection of the ribs and the wing of the scapula on the side of the convexity, backward, while on the side of the concavity, the ribs project forward, thus producing a twist in the body. In fixed cases the deformity may be lessened on suspension and bending forward, but it does not disappear.

The prognosis depends on the character of the case, the persistence of treatment, and the amount of time, patience, self-sacrifice and money the parent is willing to devote to the child. Flexible cases may be cured by persistent and proper treatment, fixed cases may be held in check or benefited—that is all that can conscientiously be promised.

Regarding the treatment, whole volumes might be written, in fact, they have been written, while more elaborate and useless apparatus for scoliosmetry and the treatment of scoliosis has been devised than would fill a museum. The scoliosmeter, or apparatus for measuring and recording the curvature, has been perfected to the acme of beauty and uselessness. Some of the designs of this apparatus resemble the Iron Maiden of Nuremburg, and are fearsome to look upon, but they make a wonderful impression on the patient's—*mind,* if displayed in a doctor's office.

The great difficulties in the way of successful treatment are the time, the work and the expense. The patients and parents often commence the treatment with great enthusiasm, but they grow tired of the monotonous round of exercises, the necessary supervision, the interference with school work and the expense. School work is one of the greatest obstacles the surgeon encounters in the treatment of scoliosis, for parents, and especially teachers, can not understand that a straight, strong body is of more importance to a child than a useless and quickly forgotten mess of Latin and mathematics. I think a very pungent and unpopular article might be written on the inaptitude of a certain class of school teachers, but that is not my province, although I feel strongly on the subject.

The first thing, therefore, is to have an understanding as to what is necessary. It is better to put it up to the patient and parents at the first, for then they will know what to expect, and will not be disappointed.

It is not possible at this time for me to give more than a few general outlines of treatment, without going into details.

The first thing, of course, is to improve the general health; this demands the use of remedies, such ones as the calcareas playing a prominent part. Contributing causes should be removed, the eye trouble should be corrected, the wry-neck straightened, the hearing improved, the depressed arch raised, or the loose-jointed knee given support. All these things are necessary and prelinminary. Then, especially in the flexible cases, the patient should be given suitable exercises to correct the curvature and strengthen the weak muscles. Electricity and massage are of great service here, and it is very important to know which are the weak muscles. As a general statement, I should say that they are on the convex side of the spinal curve, but the operator should know.

Exercises are almost without number, and one may employ all the elaborate series given by Bernard Roth and others, or use only such as seem fitted to the individual case. ,

Above all, the patient should be taught to breathe. Not one girl or woman in twenty knows how to take a full breath. If told to do so they will almost invariably fill the upper part of the chest until they look like a pouter pigeon, leaving the lower portion completely empty. It some times requires a number of lessons before the patient is able to depress the diaphragm and do abdominal breathing. This is one of the essentials for singers, and in certain cases I have employed a singing teacher as instructor. The deep breathing is beneficial in two ways: It oxygenates the blood, and it is astonishing how it improves the general condition of the patient. Also it is the only way in which *outward pressure* against the walls of the chest can be obtained. When, then, by compressing the convex side of the chest by certain postures, the concave side is expanded by a strong inhalation, much is gained in the way of voluntary correction.

I am opposed to class work in the treatment of scoliosis, because I believe the work must be adapted to each individual. With regard to retentive apparatus in the treatment of flexible cases, I prefer to do without it if possible. If it is required, it should be as light and as little confining as possible, and made especially for each patient. Most stock braces are worse than useless. If properly made, the brace may be very light. I have used them weighing as little as twenty ounces on large girls. Of course, it is understood

that in all cases the general health and the methods of sitting and standing are to be considered and looked after. „

No form of rigid jacket should be used in the treatment of a flexible case. It weakens the muscles instead of strengthening them.

As to the treatment of fixed cases, in the language of Kipling, "That is another story."

The same methods that are employed in the flexible cases, and more are of use here. Forcible extension and pressure to the farthest point of endurance should be employed. Heavier braces and even rigid jackets may be necessary to prevent progress of the deformity, and these may have to be readapted frequently from remoledel plaster casts of the patient's figure. The forcible correction methods of Redard, Lovett and others during the application of the plaster jacket may be employed. The use of complete anæsthesia during forcible correction has been employed and is to be thought of.

Just why the older Sayre's method of subcutaneous myotomy is not advocated by orthopædists now, I do not quite understand. It seems to me feasible, and I am inclined to think it might be useful in bad cases.

Where correction can not be obtained, and the patient suffers from pressure pains or from interference with the functions of vital organs, properly applied retentive apparatus may afford great relief.

THE URETHRA.

By Sprague Carleton, M. D.

It is the experience of every one that some urethral lesions evidenced by discharges are easily corrected, while others continue despite all efforts. It is the purpose of this paper to call attention to some of the causes of failure and to suggest methods for determining the proper treatment.

The first vital fact to be ascertained in a disorder presenting a urethral discharge is the presence or absence of micro-organisms. (Should you not be able to do this yourself, the work should be turned over to a competent pathologist.) If the urethral smear shows that gonococci are present, the patient should be immediately acquainted with the fact, and cautioned against infecting others, or other parts of his own body. The macroscopic appearance of the

parts and the discharges, together with the mental attitude of the patient and recital of his case, will afford the necessary information for the choice of a drug homœopathically indicated to aid the tissues to rid themselves of the affection and assume a healthy condition. For the removal of the cause—the gonococci—the safest and most efficient agent is the gonocide, "Argyrol," which destroys the gonococci, and is not harmful to the tissues. Two or three douches of a two per cent. solution injected into the urethra three times a day, and retained for five minutes, rarely fails to be efficient, and has never to our knowledge been the cause of any complication. Grape fruit, asparagus, tomatoes, and rhubarb contain an active principle that at times irritates the urethra, and, therefore, they should be eliminated from the diet. Alcohol causes congestion of the urethra reflexly through cerebral excitations, and, therefore, should be excluded. Excessive exertion or jolting is liable to cause complications, even though the patient attempts to guard himself by wearing a suspensory. If there were no pre-existing diseases of the urethra, hygienic attention to the indicated remedy and a proper gonocide should quickly procure a rapid and permanent cure.

There are, however, few urethræ that have not some congenital or acquired abnormality. Previous to some acute infection attracting special attention to the urethra, these lesions of the canal are generally tolerated without concern, and many a so-called chronic gonorrhœal urethritis is nothing other than old lesions that have developed so insidiously as not to attract attention until a superimposed acute disorder aggravated the condition and developed in their host a keener power of observation. Whether these lesions were chronic previous to infection or the chronic outcome of a recognized infection makes little or no difference in the choice of treatment. If, after the micro-organisms have disappeared from the urethral discharge, it does not continue to diminish in quantity and gradually change from a creamy or milky consistency to that resembling the white of an uncooked egg and then gradually disappear, you have an organic lesion to diagnose and correct.

If, instead of the gonococcus you discover the large non-specific urethral diplococci, a warm 1-2000 solution of permanganate of potassium should be substituted for the argyrol; or, if you find small cocci either scattered or in clumps such as result from contact with a vagina carrying a non-specific infection, then bichloride, 1-16000,

should be used instead of the argyrol, and the case conducted as was suggested under the treatment of gonorrhœa. The permanganate and bichloride injections, however, should not be retained for more than half a minute.

Let us suppose that a small area of urethral mucous membrane has been denuded, without considering whether it be due to the activities of micro-organisms the result of chemical action, or of trauma. There occurs immediately a budding of the blood vessels, and the area thus denuded is converted into a patch of graulation tissue, and this portion of the urethra loses its normal flexibility and elasticity. If we look into the urethra by means of the endoscope, the patch will appear bright red. Being tissue, congested with blood, it cannot collapse over the end of the instrument as does the normal flexible urethral wall. Examination with the Otis urethrometer will show an abnormal narrowing or loss of dilatability of the canal in the region of the lesion. Though your manipulation has been extremely delicate, bleeding will follow the instrumentation. These are the cases spoken of in the text-books under the title of "soft strictures." Later, the round cells proliferate and elongate within the granulation area and finally contract, as is the tendency of all newly formed connective tissue, and form firm scars or so-called hard strictures." We must endeavor, therefore, as much as possible to inhibit the formation of graulation tissue, for the fewer the granulations the less dense the resulting cicatrix or hard stricture.

Soft strictures, even though they be of large calibre, need careful attention until they have been completely covered by the cells of the adjacent mucous membrane. This is best accomplished by means similar to those used in the treatment of excessive granulations elsewhere; that is, the destruction of the granulation tissue by mechanical measures until the epithelial continuity is re-established. In the urethra, as elsewhere, silver nitrate is our most effective chemical agent for cutting down granulations. Mechanically, the agent most frequently employed is the steel sound. The sound, to be effectual, must be of a size sufficient to exert a pressure upon the granulations capable of crushing them to a degree that will destroy their integrity. The injured, delicate new formations then disorganize rapidly and are thrown off and carried away by the urinary stream.

The main question in the use of the sound is the choice of size.

Introducing a big or a little sound means nothing, for our idea of a large or a small sound possibly differ. The largest sound that can be passed does not mean anything, for the entire canal is more or less dilatable, and the size of the sound passed will vary with your dexterity and the patient's ability to withstand pain. Further, the largest sound that you can pass cannot be larger than the smallest calibre of the canal. Normally, the meatus is by far the smallest calibered portion of the canal. It is rare to find a soft stricture that has lessened the calibre of the urethra so that it is smaller than the meatus; therefore, without enlarging the aperture at the meatus, we can rarely pass sounds that will benefit soft strictures.

The question now arises, how to determine the size of the sounds for a particular case, and to what size must the meatus be enlarged in order to allow of the passage of said sound?

The normal narrowings and dilatations of the urethra gradually merge into one another, and the whole canal is flexible and collapsible. Strictures, on the contrary, cause definitely defined areas of narrowing, with more or less rigid walls. Strictures, thickened patches or rings, project into the canal and act as barriers against the flow of urine. This extra resistance is transmitted by the urinary stream in its exit and causes abnormal pressure on the urethral walls posterior to the stricture. Further, some of the urine of each urination is retained behind the thickened mass, and even though it runs out when the penis is allowed to assum ethe pendant posture, the sediment clings to the walls of the canal and further irritates this locality until it in turn becomes transformed into thickened tissues, thus extending the area of the original stricture.

This detailed description will show that if we wish to determine the calibre of the sound necessary to complete such a cure as is to be had from the use of sounds, we must know the calibre of the canal behind the stricture, for that represents the size to which our sounds must eventually be raised. For this, the urethrometer must be employed. It is also the guide for a meatotomy.

The sound indicated in a given case would gradually increase in size at successive treatments, from one with a calibre the size of the urethra at the point of stricture until finally one can be passed that has a calibre equal to that posterior to the area that was strictured.

Strictures are a constant source of irritation, and cause disease in the urethra posterior to them, at times even extending to the bladder

and kidneys. When the inflammation extends to the area about the ejaculatory ducts, the irritation produced is sometimes mistaken for a vigorous sexual desire. After a time, however, under the influence of the constant irritation, the walls of the region become thickened, losing their normal sensibility, and the patient suffers a material loss in the sexual function.

Should the stricture be of the hard variety, the treatment just laid out will often give transitory relief for varying periods of time, but the condition of the urethra gradually grows worse. Hard strictures should be divided, the extent of division depending upon the difference between the calibre of the urethra at and behind the stricture. After the operation, treatment similar to that of soft stricture should be instituted until resolution and healing are complete.

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A FEW PRACTICAL POINTS ON DIET AND BATHING.

By G. C. Dominick, M. D.

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Having had a poor digestion myself for some years until I found out by sad experience the proper selection in diet, I feel somewhat qualified to write this article.

First of all, I wish to call attention to the harm which many eggs can do in the dietary. A person with a uric acid diathesis should not eat many eggs if he wishes to escape tonsilitis, la grippe or rheumatism. A patient of mine who had had influenza several times each winter, on being asked if she ate many eggs, replied: "Why, yes, of course. I eat eggs every morning for breakfast." After her last attack last winter she stopped eating eggs entirely, and has had no influenza since. After eating eight to ten eggs in a few days, the patient with a uric acid diathesis and subject to tonsilitis often finds himself with a slight fever, bone pains, chilliness, headache, swollen tonsils and all the other symptoms of acute tonsilitis. Symptoms of a severe bronchial cold generally follow, and a catarrhal condition of the nose and throat with profuse yellow discharge occurs.

I have in mind a case of a lady having a uric acid diathesis and a history of repeated attacks of rheumatism who, not having had the disease for some time, started in to eat one or more eggs every morning for breakfast. After some time she developed some rheumatic pains in head and limbs, and has been laid up with stiffness and muscular rheumatism for two months in spite of having received almost every form of treatment.

I once had a patient who came to me complaining of persistent headache and on eggs being removed from her diet the headaches disappeared.

Eggs slip down the œsophagus so easily and require so little mastication that we do not realize the large amount of nitrogenous substances in them. According to Kirke's "Handbook of Physiology," page 322, 1900 edition, the whites and yolks combined contain 36.4% proteid matter in the form of egg albumin.

A word as to cream. Patients with a tendency to diarrhœa should avoid cream in any form, whether as in cream, on cereals, in hot drinks, on puddings, fruits, blanc manges, etc. It has a distinct relaxing effect on the intestinal lining and should therefore be avoided by persons suffering from diarrhœa or a tendency thereto.

It is wonderful what ordinary pure drinking water, not ice water, will do in colds and tonsilitis. A patient beginning an attack of tonsilitis will, if he drink fifteen to twenty glasses of water daily, very speedily recover. Such large amount of water dilutes the poisoned blood, purifies, promotes copious excretions from skin, bowels and kidneys, clears the mind and reduces inflammation. Of course patients having weak hearts should not indulge in the drinking of so much water, as it requires a fairly strong heart to pump so much fluid around the body.

Naturally, we all know of the distinct stimulating effect of a cold bath, but do we appreciate the equally stimulating effect of a very hot and very short shower or tub bath? For purposes of relaxation and its soothing effect upon the nerves the warm tub bath of 99° is the proper thing, but I wish to make this point clear, that in very cold weather or for persons who cannot stand a cold bath, that the very hot and very short dip is equally stimulating and invigorating. Such a bath should be taken only in a warm bath room and patients should give themselves a very thorough drying and rubbing with coarse bath towels after leaving the tub. The friction is an important part of the treatment.

ON THE NEGATIVE ASPECT OF PHYSICAL SIGNS IN PULMONARY TUBERCULOSIS.

By E. Guernsey Rankins, M. D.

When examining cases of pulmonary tuberculosis, where the diagnosis was undoubted, I have not infrequently been struck with the fact that, not only were the physical signs often negative or even contrary to the classical standard, but also that the reasons for these negative features were not always clear to the student. One is so thoroughly familiarized with the typical physical signs of pulmonary tuberculosis and the reasons for their existence, and the same are so thoroughly instilled in our minds, that sometimes the conditions that give rise to departures from standard types are not dwelt upon with sufficient emphasis.

Not always do we find anæmia or an emaciated or even a moderately thin chest, neither do we always find increased tactile fremitis or increased vocal resonance or dullness of the percussion note over an involved area.

Likewise auscultation, our main guide in physical examination, may sometimes not be as positive as we perhaps think the condition should indicate. Let us discuss these departures from the standard types of the physical diagnosis of the chest in pulmonary tuberculosis following the time-honored order beginning with inspection.

When inspection discloses a well nourished and even muscular individual we must conclude that this anomaly indicates that the pulmonary process is very recent or perhaps limited or that the individual has regained lost weight as a result of an arrested process.

Palpation is often variable. Instead of increase of fremitus over a consolidated area there may be no appreciable change or actual diminution of fremitus. The first condition may be due to feebleness of the voice, which is often observed in children and women and sometimes in men. Diminution or absence of fremitus over consolidation apart from feeble voice denotes thickening of the pleura or plugging of a main bronchus with mucus. The first condition will be constant, while the latter may not be so.

In percussion, often a pronounced higher resonance, sometimes somewhat flat in tone, but none the less a distinctly higher resonant note is sometimes obtained over the consolidated area. I do

not mean merely the higher resonance which may be observed over a cavity, or in bronchiectasis, gangrene or abscess, but extensive area of resonance heard over the whole lung. The explanation generally given to this phenomenon is that the walls of the alveoli are in a state of relaxation, "permitting the air to vibrate within a loose sac (Butler)." But does air vibrate within a loose sac so as to give a higher resonant note when percussed? I think the comparison faulty and the condition not clearly explained. We know, however, that pulmonary œdema, especially before death, gives a higher resonant note, and it is correctly presumed that the whole lung tissue is in a state of relaxation. In auscultation in comparing the respiratory murmurs of the apices it should be borne in mind that normally there is a slight degree of puerile or broncho vesicular breathing present in the right apex, which means a certain degree of harshness or of prolongation of the expiratory murmur. The same condition when present in the left apex must on the other hand be regarded as significant of change. It is difficult to always appreciate this slight difference. I should, however, regard any degree of broncho vesicular breathing in the right apex if accompanied by rales or other symptoms as suggesting pathological change.

Weakness of the respiratory murmur is the most frequent cause of difficulty in auscultation of the chest. The cause may be found in very thick chest walls in short persons; in fibrosis of the lungs, pleural effusions, thickened pleura and consolidated areas supplied by an obstructed bronchus. So far as the apex is concerned the last mentioned condition and fibrosis are those most likely to be present when the breathing sounds are fresh over consolidations.

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SPIROCHETA PALLIDA IN SYPHILITIC LESIONS.*

By G. C. Birdsall, M. D.

Before entering upon a discussion of the subject it may be interesting to review in brief form the history of this disease. In 1494, during the campaign against Naples, there appeared in the French army a venereal disease which had never before been brought to the attention of the medical profession. Owing to the social condi-

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tions then existing gonorrhœa was very prevalent, especially in the army, and it was considered that the chancre and secondary symptoms following constituted only another form or an exaggerated form of gonorrhœa. The name "syphilis," which means "from love," was given by an Italian poet, who wrote a poem upon the new form of social disease. When the army returned to France it was full of syphilitics and the disease rapidly spread throughout Europe, affecting kings, princes, nobility and peasants alike.

It was not until 1830 that Dr. Ricord (an American studying in Paris) proved that gonorrhœa and syphilis were two different diseases. It was he who promulgated the theory of primary, secondary and tertiary syphilis. Shortly afterward, Bassereau formed the distinction between true chancre and chancroid. It was discovered that mercury had almost a specific effect upon this disease and a little later the specific action of potassium iodide was proven.

Syphilis has always been classed as an infections disease, but could not be so proven. Twenty or thirty investigators have alleged finding the bacterial cause of the disease, but none have proven to be the true cause. The most important claimant was the bacillus of Lustgarten which closely resembles, if not the same as, the smegma bacillus. In 1905, Schaudinn and Hoffman, while endeavoring to identify one of the alleged causes of syphilis, observed an undescribed organism in syphilitic secretions. This organism was a spirocheta and not a bacillus and their findings were immediately confirmed in all parts of the world. Judging from all the data concerning these micro-organisms, and that they are persistently present in syphilitic lesions, brings us to the conclusion that they are either the cause of syphilis or one phase in the life cycle of some micro-organism which is the cause of syphilis.

Spirocheta have been found only in moist lesions. Dry secondary lesions are not infectious. They have been found in some tertiary lesions (gummatta), but in no other forms. Spirocheta are few in the blood if at all and have not been so demonstrated by authoritative investigators.

Spirocheta have never been cultivated, resembling the plasmodium malariæ in that respect. They are distinctly motile, having three modes of locomotion: (a) cork-screw motion on their own axis, (b) gliding back and forth, (c) bending upon their axis. Motions are very active in the fresh specimen, and whether it be in motion or at rest it always retains its spiral shape.

The staining of the spirocheta palliad requires a great deal of care and considerable experience and even then results are sometimes far from satisfactory. As the name suggests, they are pale spirocheta while all the other varieties take a heavy stain. Schaudinn and Hoffman spread the serous exudate of the moist papule or mucous patch upon slides and dried it in the air without the use of heat. A better method of collecting the specimen is to scrape the lesion with a sharp curette and spread the bloody serous exudate which results. The original investigators used the Giemsa stain and modified it by adding one cubic centimeter of 1:1000 calcium carbonate solution. Stain for one hour, wash thoroughly and dry in the air, the specimen having been previously fixed by hardening in absolute alcohol for fifteen minutes. Personally, I use Goldhorn's method of staining, as it requires much less time and seems to produce equally as good results. With this stain the spirocheta are of a purplish hue and turn black or black-brown after they are treated with Gram's or Lugol's solutions.

Spiral organisms which are not pathogenic abound upon the skin and upon the mucous membranes. In the mouth are found the spirocheta denticula, spirocheta buccalis and spirocheta vincenti. In the bowel is the spirocheta dysenteriæ and on the skin the spirocheta refrigesens. The spirocheta pallida are pale and thin and one unaccustomed to microscopic work finds it hard to recognize them. Spirocheta pallida differ from the other varieties in (a) extreme tenuity and faint staining, (b) multiple small distinct spirals, (c) very thin (all others are thick).

Spirocheta are found most frequently in the earliest and most infectious lesions of syphilis. Whether in the chancre or early secondary lesions of acquired syphilis or in the organs in inherited syphilis, they abound in the walls of the blood-vessels and perivascular tissue. They are rare in the lymph-vessels and lymph-nodes. They are in great numbers among the epithelia of the chancre or moist papule. They produce the perivascular inflammation characteristic of all syphilitic lesions and are destroyed by phagocytosis. They disappear rapidly after the administration of mercury.

The slides which I will demonstrate this evening are sections of a chancre showing the spirocheta lying between the cells.

EDITORIAL

MEETING OF THE STATE SOCIETY.

At Albany, February 8th and 9th, was held a most enjoyable and profitable meeting. The reports of the various bureaux were uniformly instructive and showed a desire among the essayists to incorporate in their paper the results of personal clinical experience and get away from the tiresome habit of writing articles culled from text-books.

This should be so, as it is the object of such meetings to exchange ideas and methods for the mutual good of physician and patient.

Perhaps the meeting might be critisised in that it somewhat lacked in the social element; men from the various sections of the State showing too much tendency to congregate by themselves rather than mingling with members from other parts.

It is at the banquet that this social side finds its greatest expression, and it has been suggested, inasmuch as many members leave as soon as the various bureaux have finished reporting, that the banquet be held on the evening of the first day, which would probably mean a much larger attendance.

CORRESPONDENCE.

Dear Doctor:—

We have been asked so frequently by the Eastern members of the American Institute "what kind of weather will we have in Southern California in July" that it seems best to say a word concerning it. Listen to what Uncle Sam says from the Southernmost Pacific Coast Government Weather Bureau Station, where climatological statistics are collected for Southern California. The following data for 1908 is given:

Temperature, Degrees Fahrenheit.

Annual mean.	Highest during year.	Lowest.
59.9	84	37

When we consider that the humidity is as low as 18 to 25 per cent. when the temperature is highest, during the so-called summer time; and the highest, when the temperature is lowest, you can

easily understand why even this variation is not noticed as much as the thermometer indicates. This is just the opposite of the Atlantic Coast climate, where during the hottest parts of the hottest days the humidity is often from 85 to 90 per cent., making existence intolerable. This is never feared on the California Coast, and there is no place more sought after by those who know than just such a place as the American Institute is going to hold its next session.

The term "winter" and "summer" as commonly used in the Eastern States have no application in California. The year is more properly divided into "rainy season" (winter) and "dry season." The dry season is the best of all the year and July is the best of all the months in the dry season. Since 1884, the twenty-five years records have been kept, not one single drop of rain has fallen during the month of July, during nineteen years, while during the other six years an average of .07 of an inch has fallen, hardly a mist.

So we plan our activities, knowing that neither rain nor excessive temperature will interfere with the participation of any one of the "doings."

If you crave an ideal vacation, under ideal circumstances, come along to the American Institute Meeting at Long Beach, California, July 11 to 16, 1910.

Fraternally yours,

WALTER E. NICHOLS,
Western Chairman Press Committee of the A. I. H.,
Pasadena, Calif.

Dear CHIRONIAN.

"The college authorities acknowledge with thanks the receipt of his class picture, that of 1891, from Dr. Charles Lee Bailey, of Albany, N. Y. It is hoped that others will be moved to add to the collection in the library."

J. W. DOWLING, *Sec'y.*

[If anyone who has class pictures but who does not care to part with them, will send the name of the photographer to the secretary the picture may be gotten if the plate is still in existence.—ED.]

February 18, 1910.

THE CHIRONIAN.

Editor, Dear Sir:—Will you please publish in the CHIRONIAN the enclosed communication. The Oklahoma State Institute of Homœopathy at its last regular meeting voted to increase its numbers at least to one hundred. The locations we offer are prizes, and many that accept will make fortunes. Dr. Hughes just died in Muskogee, Okla., 30,000 population, and leaves a $10,000 practice with only one homœopath, a lady, to take care of it. Dr. Hughes was a young doctor, and some young homœopath in the East would do well to locate there at once.

If you will please publish this in the CHIRONIAN it will give the homœopaths in the East a chance to help us increase our members, and put homœopathy where it belongs in Oklahoma. Thanking you, I am,

Yours fraternally,

W. L. BONNELL,
Sec'y and Treas. Okla. State Inst. of Hom.

OKLAHOMA IS CALLING FOR ONE HUNDRED HOMŒOPATHS.

There are one hundred homœopaths in the Eastern States and one hundred homœopaths in the Northern States looking for a good location. In Oklahoma there are one hundred locations looking for just one good homœopath.

Oklahoma is a beautiful State to live in, and is rich in coal, gas, oil and many rich minerals. The soil is of the richest and most productive kind.

The State Board of Medical Examiners in Oklahoma is very fair, and we have two very good homœopaths on the board. There is reciprocity with many of our Eastern and Northern States.

Below shows a few towns, population, number of homœopaths in them:

City.	*Population.*	*Number of Homœopaths.*
Oklahoma City, Okla.	48,000	6
Muskogee, Okla.	39,000	1
Chickasha, Okla.	15,000	3
Lawton, Okla.	10,000	1
Tulsa, Okla.	20,000	2

City.	*Population.*	*Number of Homœopaths.*
Guthrie, Okla.	22,000	2
Ardmore, Okla.	10,000	2
Norman, Okla.	4,000	1
Blackwell, Okla.	4,000	2
Enid, Okla.	15,000	1
Tecumseh, Okla.	1,750	1
Sulphur, Okla.	5,000	None.
Salpulpa, Okla.	10,000	None.
Shawnee, Okla.	20,000	None.
McAlester, Okla.	12,000	None.
Anadarko, Okla.	4,000	None.
Hobart, Okla.	6,000	None.
Bartelsville, Okla.	10,000	None.
Manguml, Okla.	6,000	None.
Cleveland, Okla.	4,000	None.
Durant, Okla.	6,000	None.
Tahlequah, Okla.	4,000	None.
Wynnewood, Okla.	3,000	None
Alva, Okla.	4,500	None.
Pawnee, Okla.	3,000	None.
Perry, Okla.	4,500	None.
Wagoner, Okla.	4,000	None.
Newkirk, Okla.	3,000	None.
Coalgate, Okla.	4,000	None.
Pauls Valley, Okla.	3,000	None.
Ada, Okla.	3,000	None.
Ten towns of population	2,500	None.

For any information write Committee on Promulgation.

W. L. Bonnell, M. D., Chickasha, Okla.;
Lottie S. Cunningham, Tulsa, Okla.;
Arthur E. Gue, Oklahoma City, Okla.

WASHINGTON LETTER.

At a recent meeting of the Washington Homœopathic Medical Society the following officers were elected:

President, Dr. M. A. Custis.

Vice-President, Dr. G. C. Birdsall.
Secretary, Dr. J. R. Shay.
Assistant Secretary, Dr. H. C. King.
Treasurer, Dr. J. H. Branson.

The Southern Auxiliary of the Alumni Association will meet soon in Washington and devise plans for gathering in more students for the coming year.

The Osteopathic Association has drawn up a bill similar to the bill now in force in Pennsylvania, and presented it to the District Commissioners for their consideration and recommendation to Congress. At a recent hearing before the Commissioners, Dr. J. D. Thomas represented the District Medical Association, and Dr. J. B. G. Custis represented the Washington Homœopathic Medical Society in opposition to the bill. The bill as presented calls for the formation of an examining board composed of osteopathic physicians who shall examine and license all applicants who are able to pass examination in the branches of medicine stated in the bill. If the bill goes to Congress, it will meet with much opposition.

Drs. King, Custis and Swormsted journeyed to Philadelphia on February 8th to attend a dinner given by the Van Lennep Club.

Interne wanted at National Homœopathic Hospital, Washington, D. C., to fill vacancy. Communicate with Dr. G. C. Birdsall, Washington, D. C.

NEW ENGLAND AUXILIARY.

The second annual meeting of the New England Auxiliary of the Alumni Association was held at the Charlesgate Hotel in Boston on Saturday, January 29th.

At six o'clock a business meeting was held, President Spalding presiding.

Two candidates for membership were elected, making a present enrollment of twenty.

Officers for ensuing year were elected as follows: President, Dr. J. W. Warren, Worcester, Mass., class '70; Secretary and Treasurer, Dr. G. H. Wilkins, Newtonville, Mass., class '83.

Following the business meeting the company adjourned to the banquet room, where an excellent menu was given due consideration.

President Spalding gave a short address abounding in wit and wisdom and proposed the following toast: "Hahnemann, the morning star in medical therapeutics, to which time and recent discoveries in pathology and therapeutics are daily adding greater brilliancy."

In closing he introduced as toastmaster of the evening Dr. G. Forrest Martin, of Lowell, Mass.

Dr. Martin in his usual happy way gave expression to his interest in the welfare of the college and introduced as the first speaker Dean Copeland.

In a clear and concise way the Dean told of progress made at the College, especially in the way of clinical material and clinical instruction. He paid a high tribute to the instructors at the College, particularly in the chair of Materia Medica, which is and should be the distinguishing feature of a Homœopathic College.

Of course, all were delighted to hear him report that more new men were enrolled this year than ever before in the history of the College.

Dr. Rand, of Worcester; Dr. Whitemarsh, of Providence; Dr. Moore, of Boston; Dr. Muncy, of Providence, and the President-elect, Dr. Warren, of Worcester, severally spoke of the various phases of the physician's life, of the outlook for Homœopathy and of the work of our College.

All seemed to recognize a danger that Homœopathy and the Materia Medica receive too little attention, while surgery, pathology and the other specialties are given undue prominence—not that we love these less, but Homœopathy more.

The meeting was a most enjoyable family party, where heart to heart talk flowed freely.

G. H. WILKINS,
Secretary.

ALUMNI NOTES.

The Albany section of loyal alumni held a pleasant meeting at a supper in the Hotel Ten Eysk during the meeting of the State Society recently. The room was filled and the "standing room only" sign was out. Speeches by the Dean, Drs. Blackman, Schenck, Dowling, Birdsall, with sotto voce remarks by Martin, under the leadership of Joe Dowling, were features of the evening. This section is flourishing and has the right spirit.

Dr. Edmund M. Devol, '96, of Brooklyn, N. Y., has opened an office at 142 West 57th Street, Manhattan, where he can be consulted between the hours of four and six P. M. Sundays, three to four. Telephone, Columbus 5607. Dr. Devol still retains his Brooklyn office.

VACANCIES ON THE INTERNE STAFF AT THE METROPOLITAN HOSPITAL.

There will be eighteen vacancies to be filled on the interne staff at the Metropolitan Hospital, New York City, on June 15th.

Examinations for the positions will be held on April 1st at the hospital.

Applications should be addressed to Edward P. Swift, M. D., Chairman Examining Committee, 170 West 88th Street, New York.

OBITUARY.

Henry J. Coleman, M. D., '61, of Lorman, Jefferson County, Miss., a surgeon in the Confederate service during the Civil War, died suddenly Jan. 16, 1910, at his plantation home, near Port Gibson, Miss., aged 77 years.

Charles E. Jones, M. D., '82, of Hartford, Conn., died January 24, 1910.

MEDICO-LEGAL HINTS.

SCHOOLS OF PRACTICE.

In the United States the courts hold all legalized schools or system of medicine as being entirely on a par. If a person announces himself as belonging to any particular system of medicine and practices as such, he cannot be held liable for unfavorable results. The patient who employs such a practitioner and suffers either in limb or limb has no redress under the law. He made his own selection, and must suffer the consequences.

PERTAINING TO FEES.

It often occurs in case of serious accident that several physicians are hurriedly called to attend an injured individual, by as many different persons. It is well to know that the third party who so

calls the physician cannot be held legally responsible for his fee, unless there is a specific agreement to that effect. It is a general rule in law that a promise to pay the debt of another to be valid must be in writing. An employer or corporation often calls a physician to attend an injured employee, but in the absence of an understanding to that effect no liability is incurred by the employer. The physician must look to the patient for his compensation.

WHAT THE PROSECUTION MUST SHOW.

When the practice of an attending physician or surgeon is called in question in court, the prosecution must show that the alleged injury to the health of the patient was actually caused by the bad treatment of the physician, and also that the bad results could have, and should have, been foreseen and avoided, if ordinary skill and judgment had been used. The courts have held that an error of judgment with no implied malice on the part of the physician is clearly excusable, "if the error was one into which a prudent man might have fallen."

THERE ARE NO SPECIFICS.

A physician would not be held legally liable if he failed to employ any particular remedy in a given disease, since there are no specific remedies, nor any one remedy upon which all authorities agree, and it is always possible that a sick person might recover without the use of any remedy at all. In cases of poisoning, however, if the physician failed to use the usually accepted antidotes, or in case of a surgical operation, if none of the usually accepted antiseptics, or aseptic methods that are consideerd essential for favorable results in such cases were used, and if death or serious consequences followed such neglect the physician would be held responsible for criminal carelessness, as he would be considered to have departed entirely from the usually adopted treatment in such cases.

PHYSICIAN'S BOOK ACCOUNTS.

It has been decided by some courts that to enable a physician to recover fees for service by law suit, that the record for such service should be kept in an intelligent form, and in a regular book; which should contain the original entry. Cabilistic signs not employed in ordinary business transactions and not understood by accountants generally are not considered sufficient to establish a claim.